

# OVERCROWDING AND STRESS LEVELS AMONG FEMALE PRISONERS: A CROSS-SECTIONAL STUDY

Hasna Rabbani<sup>1</sup>, Nur Oktavia Hidayati<sup>2\*</sup>

<sup>1,2</sup> Faculty of Nursing, Universitas Padjadjaran, Bandung, Indonesia

## Article Information

Received: 3 July 2023  
Revised: 28 December 2023  
Accepted: 31 May 2024

## \*Corresponding Author

Nur Oktavia Hidayati  
nur.oktavia@unpad.ac.id

## DOI

10.20884/1.jks.2024.19.2.9121

## ABSTRACT

Overcrowding is when the number of people in a space exceeds its specified capacity. This phenomenon often occurs in prisons and has been recognized as a significant contributor to psychological problems, especially stress among prisoners. This study addresses this gap by narrowing our focus to female prisoners, who exhibit greater physical and psychological vulnerabilities than male prisoners. This study investigates the relationship between overcrowding and stress levels in prisoners. This study used a correlational design with a sample of 82 female prisoners selected using a simple random sampling technique. The Overcrowding Scale and the Perceived Stress Scale-10 were the standardized instruments used in this study. Data were analyzed using Rank Spearman. The analysis revealed a positive relationship between overcrowding and stress levels with  $p = 0.000$  and  $r = 0.415$ . Therefore, nurses can provide education to minimize the prisoners' stress levels, and prison officers can improve prisoner fulfillment of psycho-socio-spiritual needs. Future comparative studies can be conducted across various prison facilities to identify variations in stress levels, assess the effectiveness of interventions, and explore sociocultural influences on the well-being of prisoners.

Keywords: *Overcrowding; prisons; stress; women prisoners*



ISSN : 1907-6637

e-ISSN : 2579-9320

## INTRODUCTION

Indonesia has the fourth highest number of prisoners in Asia (World Prison Brief, 2022). There is an excess number of prisoners at 109% or twice the total capacity of prisoners in correctional institutions in Indonesia. According to data from the Directorate General of Corrections, there are 276,172 (201%) prisoners in prisons with a total capacity of 132,107 people (Ditjenpas, 2022). Overcrowding occurs when the number of prisoners exceeds the available housing capacity (Sianturi et al., 2022).

Septianis' (2021) research on inmates and detainees in Pekanbaru Prison stated that the prison's average crowding was in the "medium" category with 130 people. This finding aligns with Sunarko's research (2016) on prisoners at Martapura Prison, who stated that there was moderate density in the cells. However, many prisoners felt uncomfortable in their cells due to the limited physical space around them. Moreover, one of the prisons experiencing overcrowding is the women's penitentiary. Currently, there are 455 prisoners registered in Bandung City Class II A Women's Prison with a total capacity of only 227 prisoners.

These statistics indicate an excess of prison occupants of 100.44% or twice the specific total capacity.

The overcrowding of a dwelling refers to the ratio between the number of occupants and the area of the house they occupy, measured in square meters ( $m^2$ ), with a minimum requirement of 8  $m^2$ /person (Mariana & Hairuddin, 2018). In the Bandung City Class II A Women's Prison, there are 47 cell rooms with an average area of around 40  $m^2$  occupied by 7-10 people. This means that each person only gets 4-5  $m^2$  of room area instead of what should be a minimum of 8  $m^2$ /person.

According to gender, female and male prisoners can have the same rights and obligations, but psychologically, women are different from men. Female prisoners are known to be more prone to mental disorders than men. When a woman is imprisoned, she tends to experience significant stress, including fear and discomfort, due to negative perceptions of female prisoners. In addition, persistent pressures in prison include torture, beatings, harassment, poor health conditions, lack of adequate facilities, having a social stigma attached

after leaving prison, and women having a higher prevalence of experiencing medical disorders, mental health, and addiction compared to men (Hadi et al., 2018).

Hormonal differences also affect the incidence of stress in women and men. Women will experience premenstrual and postmenstrual phases, marked by an increase in the production of the estrogen hormone. This phase is often accompanied by negative feelings, discomfort, and emotional changes (Arisandi & Setia, 2021). Stress in men is more internal and dominant in behavior, while stress in women is external and the impact can be seen through their emotional aspect, often shown through symptoms such as irritability, cynicism, and even apathy, furthermore, a study conducted by the University of Australia showed that 40% of psychological health problems in prisoners are stress (Kurniasari et al., 2021).

Stress is a condition or event that changes a person's life, encouraging individuals to adjust to their environment (Ernawati & Masnina, 2020). One of the causes of stressful conditions in prisoners is overcrowding, social isolation, and limited personal space, which also limits their behavior. These conditions can make prisoners feel constrained and cramped (Pranata, 2021). If overcrowding is not overcome and allowed to continue, it will cause prisoners to experience continuous stress (Hermawan, 2014).

Recent studies on stress among prisoners have identified a growing recognition of the multifaceted nature of stressors within prisons. Research by Smith et al. (2023) emphasizes the interconnectedness of environmental factors, such as overcrowding, with the mental well-being of inmates. Additionally, a study conducted by Moore et al. (2021) explores the long-term effects of persistent stress in prison environments, shedding light on the enduring psychological impact on individuals.

Although existing research acknowledges the role of factors such as overcrowding in contributing to stress among prisoners, there remains a gap in understanding the specific impact of these conditions on the psychological well-being of female prisoners. Few studies have explored into the distinct vulnerabilities and experiences of female inmates in overcrowded prison settings including Anggit & Ni, (2017); Asnita et al., (2015) research. This study aims to address this gap by explicitly focusing on female prisoners, exploring how overcrowding influences their stress levels, and considering the unique challenges they face in such environments. Nuanced examination of stress in the context of overcrowding among female prisoners is a key aspect that contributes to the novelty and significance of this research.

## METHOD

### Study design

This is a correlational quantitative study that employed a cross-sectional approach.

### Sample

The population in this study was 442 female prisoners who had been in prison for more than one year, did not experience any mental disorders, and were not in isolation. Simple random sampling with Slovin formula ( $n = N / (1 + (N \times e^2))$ ) was used to obtain the sample size of 82 female prisoners from a total of 4 blocks. In blocks that had several prisoners, selection was performed randomly by asking inmates who were willing to participate in the research.

### Instrument

The Crowding Scale was used to measure overcrowding levels and the Perceived Stress Scale (PSS-10) was used to measure stress levels. The validity of the Crowding Scale instrument was tested by Anggraeni in 2021 with a professional judgment. As a result, six items of 21 were invalid. Therefore, 15 question items were used and content conformity was ensured by following the indicators. Interpretation of The Crowding Scale based on Azwar (2012) is categorized into high:  $x < 33,28$ ; medium:  $33,28 \leq x \leq 45,76$ ; low:  $x > 45,76$ . Meanwhile, the Indonesian version of PSS was conducted through a concurrent validity test. The results stated that the PSS scale was said to correlate with a Cronbach's Alpha value of 0.81. Interpretation of Stress Level Scale based on Azwar, (2012) is categorized into high:  $x < 10,81$ ; medium:  $10,81 \leq x \leq 20,71$ ; low:  $x > 20,71$ .

### Data collection

After obtaining ethical approval from the relevant parties, informed consent forms were distributed and obtained from willing participants. The data collection process was then conducted offline by directly providing questionnaires, filled out by respondents and coordinated by prison officers to be collected by researchers 2 weeks later.

### Data analysis

The data obtained were analyzed using univariate and bivariate techniques with the Spearman rank test using the Statistical Package for Social Sciences (SPSS) software data processing program.

### Ethical consideration

This research has received approval from the Padjadjaran University Health Ethics Commission under certificate number 526/UN6.KEP/EC/2023. In addition, the researcher also applied for permission to the Head of the Ministry of Law and Human Rights Regional Office to conduct research at the women's penitentiary. The researchers have been granted permission to carry out research under the number W.11 - UM.01.01 – 1541.

## RESULTS

The data collection process obtained the demographic characteristics of the respondents, namely age, level of education, type of crime committed, and length of the prison sentence.

**Table 1. The characteristics of the respondents (N = 82)**

Demographic Data	n	%
<b>Age</b>		
Adulthood (20-25 years)	12	14.6
Middle adulthood (26-45 years)	50	61.0
Elderly (46-60 years)	20	24.4
<b>Education level</b>		
High education (Associate degree-higher)	13	15.9
Basic education (elementary-high school)	69	84.1
<b>Criminal act</b>		
Violence-Crime	1	1.2
Money Laundering	2	2.4
Narcotics	37	45.1
Murder	4	4.9
Embezzlement	6	7.3
Fraud	7	8.5
Child protection	3	3.7
General crime	19	23.2
Corruption	3	3.7

Demographic Data	n	%
<b>Length of punishment</b>		
1-10 years	64	78.0
10-20 years	16	19.5
Lifetime	2	2.4

Table 1 shows that based on the age range categories of early adulthood, middle adulthood, and elderly, most of the respondents are in the middle adulthood category at 61.0%. Regarding the level of education, most of the respondents had a basic level of education (elementary to high school) of 84.1%. In terms of the type of crime committed, most of the respondents committed narcotics crimes at 45.1%. The data shows that most of the respondents served a criminal sentence of 1-10 years at 78.0%.

**Table 2. Score distribution based on the overcrowding category**

Category	n	%
High	17	20.7
Medium	58	70.7
Low	7	8.5
Total	82	100

Based on Table 2, there are data on the overcrowding category for female prisoners of women's penitentiary, it is found that most of the respondents are in the medium overcrowding category, namely 58 people with a percentage of 70.7%.

**Table 3. Score distribution based on stress level category**

Category	n	%
High	17	20.7
Medium	52	63.4
Low	13	15.9
Total	82	100

Table 3 shows data on the stress levels of female prisoners. The majority of the respondents were found to be in the moderate stress level category in 52 people or 63.4% of the respondents.

**Table 4. Relationship of overcrowding with stress level**

Variable	n	Correlation coefficient (r)	P value
Overcrowding and stress level	82	0.415	0.000

Table 4 presents the results of the Spearman rank correlation analysis. It was carried out to determine whether there is a relationship between overcrowding and stress levels. The significant value obtained is 0.000 with a significant value of <0.05. Therefore, it can be concluded that there is a relationship between overcrowding and stress levels.

In addition, the Spearman correlation coefficient value of 0.415 indicates a very significant positive relationship between the two variables. This positive or unidirectional correlation indicates that the higher the level of overcrowding, the higher the level of stress and vice versa.

## DISCUSSION

The findings reveal that a substantial majority of prisoners perceive the level of overcrowding in the prison environment as moderate. A smaller proportion of respondents feel the overcrowding is low, while another segment perceives a high

overcrowding. These results align with Sunarko et al.'s (2016) study on residents of the Class II A Children's Prison in Martapura, which stated moderate overcrowding in the cells. However, many prisoners felt uncomfortable in their cells due to the limited physical space around them. As explained in Gifford's theory, overcrowding is influenced by physical environmental factors such as room conditions, buildings, and building architecture. Crowding can affect physiology, social interactions, negative feelings, and how a person deals with problems.

Furthermore, Danyalin and Tantiani (2022) conducted a similar study in an Islamic boarding school. Their results showed that the overcrowding felt by adolescents in Islamic boarding schools was in the medium overcrowding category. Wahyu et al. (2020) also studied a settlement and found that the overcrowding felt by an individual living in a marginal settlement was in the moderate category. This phenomenon occurred because people who have adapted tend to prefer to face their lives in a crowded environment rather than seeing overcrowding as a problem (Ellisa, 2016).

The physical characteristics of the women's prison studied can be considered overcrowded because each occupant only gets 4 m<sup>2</sup> of space in each room, while the minimum requirement is 8 m<sup>2</sup>/person. However, the physical environment inside the prison is quite beautiful because there are lots of greenery and trees. There is also a gazebo, which is often used for self-development activities such as dancing and scouting. In addition to that, various other activities are generally carried out by female prisoners in the women's penitentiary, including gardening, raising livestock, various artistic activities, cosmetology, cooking, and crafting various products for sale. These activities are carried out indoors and outdoors, providing a new atmosphere for prisoners living alone in their cells. This can bring physical comfort that can be felt directly by all prisoners.

A person's general feeling of comfort in their environment must be assessed from a wide range of aspects, as it is affected by various stimuli. Feelings will be involved in the assessment of the environment, not just physical and biological matters. The brain processes different stimuli caused by light, temperature, smell, sound, etc. It will then assess whether the condition is comfortable (Prasasto Satwiko, 2009).

This study found that the sampled female prisoners experienced moderate overcrowding in their prison. Other than the inadequate ratio between the number of occupants and the room area, other factors contribute to respondents stating that overcrowding is in the medium category. The length of time served by the prisoners is one of the factors that influence the perception of overcrowding. Most of the respondents were sentenced to prison terms of 1-10 years. As most of the prisoners sampled serve prison terms of more than one year, perhaps this made them able to accept their current living situation. They can adapt to their existing prison environment by coping with their problems more adaptively (Agnesia et al., 2018).

Furthermore, Agnesia et al. (2018) found in their study that more prisoners have adaptive coping techniques than maladaptive coping mechanisms. The high number of respondents who used adaptive coping could be because the respondents were adults to allow them to control themselves, their emotions, and existing problems. Furthermore, their prison sentences were over five years, making them more willing to accept the existing situation. The respondents' term

of more than two years is also long enough for them to adapt to the environment around them. Therefore, they can be more sincere, control themselves, and implement adaptive coping strategies.

This study obtained data from 82 female prisoners in a women's penitentiary and found that most prisoners felt a moderate level of stress in prison, a small number felt a low level of stress, and others felt a high level of stress. A similar study was conducted by Anggit and Ni (2017) on female prisoners in a correctional institution in Bogor. They observed that most of the prisoners experienced stress. Living in a prison, isolated from the outside world, and being apart from people they know and love can cause prisoners to experience psychological disturbances (Anggit & Ni, 2017). These findings are also supported by Ratnasari et al. (2020), who researched a women's penitentiary in Tangerang. The level of stress experienced by the prisoners was mostly moderate stress, a small proportion was severe stress, and some were mild stress. Moreover, Asnita et al. (2015) revealed that most of their respondents from correctional institutions experienced moderate stress, a small number felt mild stress, and others felt severe stress. According to Jaya (2015), the length of the sentence served, the legal problems involved, and the verdict obtained from the court can also affect the prisoner's stress level.

Stress is a general reaction and adjustment that occurs when a person is faced with a stressor. These stressors can be concrete or abstract and can come from internal or external sources (Musradinur, 2016). According to Pranata (2021), one cause of stress experienced by prisoners is their limited personal space due to overcrowding, isolation from society while in prison, and lack of privacy.

Furthermore, in terms of the social environment factor, women prisoners in women's penitentiaries have good social relationships with fellow prisoners, as shown by the absence of seniority in prisons and the fact that all prisoners mingle with one another. Additionally, it is common for female prisoners at women's penitentiaries to be visited by relatives with a maximum of 3 visits a week and they often receive food as gifts. Such gifts can lead to social comfort regarding the interpersonal, family, and social or community relations of prisoners. Social comfort can occur when basic needs of a person are met through comfortable social interactions over a certain space and time. Basic needs are defined as spatial needs that comprise stimulation, security, and identity (Hariyono, 2007).

This research found that the female prisoners in the women's penitentiary studied have a moderate level of stress. This moderate stress level can be attributed to the positive social environment among fellow prisoners and other factors, such as the education level of prisoners. Most of the respondents were elementary-high school graduates. Research by Fijianto et al. (2021) revealed that there is a positive relationship between education level and coping strategies for prison prisoners. Prisoners with a high level of education can manage their emotions, motivate themselves, recognize other people's emotions, and build strong relationships.

The results showed that the level of education of female prisoners in the studied women's penitentiary was moderate. A high level of education is typically accompanied by a high level of knowledge and experience. This statement is supported by Rachmah and Rahmawati (2019), who found that there is a significant relationship between knowledge and the coping mechanisms used by a person. Research explains

that people with greater knowledge of stress will implement more adaptive coping mechanisms.

Then, the most common crimes committed in the studied women's penitentiary were narcotics-related crimes at 45.1%. According to Siswati and Abdurrohm (2016), while in detention cells, prisoners involved in drug cases do not receive special therapy to eliminate the effects of drugs in their bodies (detoxification) due to high costs. Instead, religious therapy is emphasized. However, the detoxification process is essential for the overall healing process in cases of psychoactive substances. Therefore, this lack of adequate treatment is one of the causes of high stress in prisoners who commit narcotic crimes. To overcome this issue, prisoners can receive stress management training, as was done by Siregar et al. (2020) for Class I Male Prisoners at Tanjung Gusta Medan Prison. After participating in stress management training, there was a decrease in the number of participants with high stress levels and participants with moderate stress levels. Thus, stress management training can be an option to help prison prisoners reduce stress levels.

Then, the Pearson's correlation test conducted revealed that  $h_0$  is rejected and  $h_1$  is accepted, considering that the significant value obtained in this study is 0.000 with a significant value  $<0.05$ . These results indicate that the women prisoners in the studied women's penitentiary have a significant positive relationship between overcrowding and stress levels. The positive correlation between the two variables shows that as the overcrowding increases, the stress levels of the female prisoners will also increase. On the contrary, if the overcrowding decreases in female prisoners, their stress levels will also decrease.

Similar research was conducted by Septianis (2021) with 322 prisoners and detainees in a Detention Center in Pekanbaru. The results showed that there was a crowding effect that resulted, in the stress experienced by prisoners and detainees during the COVID-19 period. However, crowding contributed to 9.3% of prisoner stress, and the remainder was from other factors (Septianis, 2021). Another similar study was conducted by Cholidah et al. (1996) with 80 adolescents living in the Duri Utara subdistrict, West Jakarta, which is a densely populated settlement. The results showed a significant positive relationship between density and overcrowding with stress. The overcrowding and tightness variables also contributed significantly to the resident's stress levels at 17% (Cholidah et al., 1996). Moreover, Feby Fadilla et al. (2022) interviewed 72 women living in flats in Padang City and found a significant relationship between stress and living in flats in Padang City. In addition, the congestion variable also significantly contributed to the resident's stress levels at 19% (Fadilla Feby et al., 2022).

These results align with Welta and Agung's (2017) research, which found that overcrowding plays an important role in the emergence of stress in prisoners. This relationship may be due to the sensitivity of prisoners, who perceive the feeling of overcrowding as a form of pressure. This feeling of pressure can then affect the physiology, psychology, and behavior of prisoners, leading to stress. Adegoke also states (2014) that individuals who live in dense environments tend to feel more anxious and restless, causing them to withdraw from social interactions.

The drawbacks of this study include the limited literature in prison overcrowding and stress levels specifically for female prisoners. Thus, the researcher discussed the study results from a general perspective. Researchers could not directly

observe the physical environment and activities of the prisoners. In addition, the questionnaire that the respondents completed could not be directly monitored by the researchers, making it difficult for the researchers to know the restrictions that they might face when filling out the questionnaires. Furthermore, the questionnaires were distributed by correctional officers. Therefore, respondents may have provided answers that do not reflect their actual conditions.

## CONCLUSION AND RECOMMENDATION

Data analysis revealed a strong positive relationship between overcrowding and stress levels in female prisoners in a women's penitentiary. The higher the level of overcrowding, the higher the level of stress experienced, and conversely, the lower the level of overcrowding, the lower the level of stress experienced by prisoners. Additionally, the average category of stress and overcrowding levels for female prisoners at the studied women's penitentiary is in the moderate category.

The results of this study will help to draw attention to the overcrowding factor in prisons, acknowledging it as one of the elements that can influence stress levels in prisoners, especially female prisoners. Overcrowding in prisons can be reduced by decreasing the capacity or quota for the number of prisoners, which would also decrease the number of criminal incidents. Prisons also need to pay special attention to the psychosocial sociospiritual needs of prisoners with the help of existing nurses.

The weakness of the study lies in the inclusion of prisoners who may still be struggling with drug or narcotic addiction. This condition could introduce a confounding variable, as substance addiction is a complex factor that could independently influence participants' stress levels. Individuals with active drug dependence can face challenges in isolating the specific impact of overcrowding on stress, as addiction-related stressors could potentially overshadow or interfere with the effects being studied. Therefore, the study findings may be less precise in attributing stress solely to overcrowding, given the potential influence of ongoing substance dependence among some participants. Future research may benefit from a more refined participant selection process to better isolate the impact of overcrowding on stress levels.

The results of this study can be used as initial data and a reference source for related research. Future researchers can also improve this study by expanding its scope and using additional data collection techniques, such as observations and in-depth interviews, to improve or complement further research. Additionally, further research must consider the relationship between other factors that can affect female prison stress levels of female prisoners, such as sentence length, type of crimes committed, and other factors.

Nurses should be mindful of the higher mental health risks of female prisoners, such as the higher prevalence of medical, mental health and addiction disorders compared to male prisoners. Nurses should facilitate a supportive environment for mental health in prison, such as providing psychological support, counseling, and rehabilitation programs that suit the needs of inmates. Nurses need to collaborate with multidisciplinary teams, such as psychologists, social workers, and prison officers, to provide comprehensive and holistic care in addressing mental health and stress issues in prisoners. Nurses should advocate for improved prison conditions, such as adequate facilities, good health

conditions, and prevention of torture or abuse, to reduce the pressure and stress that prisoners experience during their incarceration.

## REFERENCES

- Adegoke, A. A. (2014). Perceived effects of overcrowding on the physical and psychological health of hostel occupants in Nigeria. *IOSR Journal of Humanities and Social Science*, 19(9), 01–09. <https://doi.org/10.9790/0837-19980109>
- Agnesia, A., Halim, A., & Manurung, I. (2018). Mekanisme koping narapidana kasus narkoba yang menjalani vonis masa hukuman di lembaga pemasyarakatan. *Jurnal Keperawatan*, X(1), 97–103. <https://doi.org/10.26630/jkep.v10i1.324>
- Anggit, F., & Ni, A. (2017). Tingkat stres dan harga diri narapidana wanita di Lembaga Pemasyarakatan Kelas li A Kota Bogor. *Jurnal Riset Kesehatan*, 9(2), 26–33. <https://doi.org/10.34011/jurikesbdg.v9i2.288>
- Anggraeni, S. (2021). *Peranan kesesakan (crowding) terhadap psychological well-being pada narapidana di Lembaga Pemasyarakatan (Lapas) Kelas li A Pekanbaru* [Universitas Islam Negeri Sultan Syarif Islam Riau]. <http://repository.uin-suska.ac.id/id/eprint/54878%0A>
- Arisandi, W., & Setia, A. (2021). Faktor – faktor yang berhubungan dengan kejadian stres pada mahasiswa tingkat akhir di Universitas Mitra Indonesia tahun 2020. *Jurnal Ilmu Kesehatan Indonesia (JIKMI)*, 2(2), 1–9. <https://doi.org/10.57084/jikmi.v2i2.816>
- Asnita, L., Arneliwati, & Jumaini. (2015). Hubungan tingkat stres dengan harga diri remaja di lembaga pemasyarakatan. *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Keperawatan*, 2(2), 1231–1240. <https://jom.unri.ac.id/index.php/JOMPSIK/article/view/8288>
- Azwar, S. (2012). *Penyusunan Skala Psikologi* (3rd ed.). Pustaka Pelajar.
- Cholidah, L., Ancok, D., & Haryanto. (1996). Hubungan kepadatan dan kesesakan dengan stres dan intensi prososial pada remaja di pemukiman padat. *Psikologika*, 1, 56–64. <https://journals.indexcopernicus.com/search/article?articleId=2337893>
- Danyalin, A. M., & Tantiani, F. F. (2022). Distress and psychological well-being in adolescents in Islamic boarding schools. *Jurnal Ecopsy*, 9(1), 29. <https://doi.org/10.20527/ecopsy.2022.03.003>
- Ditjenpas. (2022). *Penghuni lapas di seluruh Indonesia (19/9/2022)*. Databoks. <https://databoks.katadata.co.id/datapublish/2022/09/23/penghuni-lapas-dan-rutan-kelebihan-kapasitas-109-pada-september-2022#:~:text=Penghuni Lapas dan Rutan Kelebihan Kapasitas 109%25 pada September 2022,-Demografi&text=Ber dasarkan data Direktorat Jenderal>
- Ellisa, E. (2016). Coping with crowding in high-density kampung housing of Jakarta. *Archnet-IJAR*, 10(1), 195–212. <https://doi.org/10.26687/archnet-ijar.v10i1.790>
- Ernawati, E., & Masnina, R. (2020). Hubungan antara strategi koping dengan tingkat stres pada narapidana di Lapas Narkotika Kelas lii Samarinda. *Borneo Student Research*, 1(3), 2151–2155. <https://journals.umkt.ac>

id/index.php/bsr/article/view/882

- Fadilla Feby, Fikri, H. T., & Ade, F. S. (2022). Hubungan antara kesesakan dengan stres pada istri di Rumah Susun dan Sewa (Rusunawa) Kota Padang. *Psyche 165 Journal*, 15(4), 134–139. <https://doi.org/10.35134/jpsy165.v15i4.202>
- Fijianto, D., Rejeki, H., & Aryati, D. P. (2021). Hubungan tingkat pendidikan dengan strategi koping warga binaan pemasyarakatan di Lapas Kelas I B Brebes. *Jurnal Keperawatan Muhammadiyah Alamat*, 6(1), 31–36. <https://doi.org/10.30651/jkm.v6i1.7155>
- Hadi, I., Rosyanti, L., & Afrianty, N. S. (2018). Tingkat Kecemasan Narapidana Wanita di Lapas Kendari dengan Kuesioner Taylor Manifest Anxiety Scale (TMAS) Anxiety Levels of Female Prisoners in Kendari Prison using the Taylor Manifest Anxiety Scale (TMAS) Questionnaire. *Health Information : Jurnal Penelitian*, 10(2), 82–89.
- Hariyono, P. (2007). Sosiologi kota untuk arsitek. In *Bumi Aksara*.
- Hermawan, P. C. (2014). *Studi mengenai gambaran crowding stress pada warga berusia remaja di pemukiman padat penduduk Kelurahan Babakan Asih Kota Bandung*. <http://pustaka.unpad.ac.id/wp-content/uploads/2014/08/Studi-Mengenai-Gambaran-Crowding-Stress.pdf>
- Jaya, N. K. (2015). *Keperawatan jiwa*. Bina Rupa Aksara.
- Kurniasari, L., Mustikarani, L., & Ghozali. (2021). Fulfillment of spiritual needs to decrease stress level of female prisoners. *Faletehan Health Journal*, 8(3), 210–215. <https://journal.lppm-stikesfa.ac.id/index.php/FHJ/article/view/228/100>
- Mariana, D., & Hairuddin, M. C. (2018). Kepadatan hunian, ventilasi dan pencahayaan terhadap kejadian tb paru di wilayah kerja Puskesmas Binanga Kabupaten Mamuju Sulawesi Barat. *Jurnal Kesehatan Manarang*, 3(2), 75. <https://doi.org/10.33490/jkm.v3i2.40>
- Moore, K. E., Siebert, S., Brown, G., Felton, J., & Johnson, J. E. (2021). Stressful life events among incarcerated women and men: Association with depression, loneliness, hopelessness, and suicidality. *Health and Justice*, 9(1), 1–15. <https://doi.org/10.1186/s40352-021-00140-y>
- Musradinur. (2016). Stress dan cara mengatasinya dalam perspektif psikologi. *Jurnal Edukasi*, 2(2), 183–200. <https://doi.org/10.55352/uq.v13i1.412>
- Pranata, J. (2021). *Hubungan kesesakan dengan stress narapidana di lapas*. 8(5), 1067–1072. <http://jurnal.um-tapsel.ac.id/index.php/Justitia/article/view/2763>
- Prasasto Satwiko. (2009). Arsitek digital, arsitek digital dan masa depan arsitektur global. *Arsitektur > Teknologi Arsitektural Penelitian Dosen > Arsitektur > Teknologi Arsitektural*, 15–30. <http://e-journal.uajy.ac.id/id/eprint/10858>
- Rachmah, E. R. N., & Rahmawati, T. (2019). Hubungan pengetahuan stress dengan mekanisme koping remaja. *Dinamika Kesehatan Jurnal Kebidanan Dan Keperawatan*, 10(2), 595–608. <https://doi.org/10.33859/dksm.v10i2.517>
- Ratnasari, F., Gandaria, Y. F., Wibisono, H. Y., & Puspita Sari, R. (2020). Dukungan keluarga dengan tingkat stres warga binaan di Lembaga Pemasyarakatan Perempuan Tangerang. *Edu Dharma Journal: Jurnal Penelitian Dan Pengabdian Masyarakat*, 4(2), 110. <https://doi.org/10.52031/edj.v4i2.67>
- Septianis, C. (2021). *Pengaruh kesesakan (crowding) dengan tingkat stres pada tahanan dan narapidana yang ada di Rutan Kelas I Pekanbaru pada masa covid-19*. <http://www.ufrgs.br/actavet/31-1/artigo552.pdf>
- Sianturi, L.R., L., & Wibowo, P. (2022). Implementasi permenkumham nomor 11 tahun 2017 tentang grand design penanganan overcrowded di Lapas Kelas IIB Siborongborong. *Jurnal Pendidikan Kewarganegaraan Undiksha*, 10(1), 21–32. <https://doi.org/10.23887/jpku.v10i1.42684>
- Siregar, R. H., Hasnida, Sutatminingsih, Lubis, R., Saragih, J. I., & Juariani, A. (2020). Manajemen stres untuk menurunkan tingkat stres narapidana (pelatihan pengabdian di Lapas Kelas I Tanjung Gusta Medan). *Jurnal Ilmiah Ilmu Komunikasi (Communique)*, 2(2), 70–74. <https://ejournal.stikpmedan.ac.id/index.php/JIKQ/article/view/29/28>
- Siswati, T. I., & Abdurrohman. (2016). Masa hukuman & stres pada narapidana. *Proyeksi*, 4(2), 95–106. [http://research.unissula.ac.id/file/publikasi/210799003/164408 triana\\_dan\\_abdurrohman.pdf](http://research.unissula.ac.id/file/publikasi/210799003/164408 triana_dan_abdurrohman.pdf)
- Smith, L. R., Ingel, S., & Rudes, D. S. (2023). “Like an animal”: the well-being of women living in restricted housing units. *Health and Justice*, 11(1), 1–14. <https://doi.org/10.1186/s40352-023-00215-y>
- Sunarko, G., Anward, H. H., & Erlyani, N. (2016). Peranan kesesakan terhadap perilaku agresi pada warga binaan Lembaga Pemasyarakatan Anak Kelas IIA Martapura. *Jurnal Ecopsy*, 1(3), 84–87. <https://doi.org/10.20527/ecopsy.v1i3.494>
- Wahyu, A. M., Karisma, L., Ridwan, Q., Hariyanti, A., & Sa'id, M. (2020). Kesesakan sebagai prediktor kesejahteraan psikologis: sebuah studi di Kampung Biru Arema Kota Malang. *Journal An-Nafs: Kajian Penelitian Psikologi*, 5(2), 157–170. <https://doi.org/10.33367/psi.v5i2.1083>
- Welta, O., & Agung, I. M. (2017). Kesesakan dan masa hukuman dengan stres pada narapidana. *Jurnal RAP UNP*, 8(1), 60–68. <http://ejournal.unp.ac.id/index.php/psikologi/article/view/7952/6071>
- World Prison Brief. (2022). *Highest to lowest - prison population total*. [https://www.prisonstudies.org/highest-to-lowest/prison-population-total?field\\_region\\_taxonomy\\_tid=16](https://www.prisonstudies.org/highest-to-lowest/prison-population-total?field_region_taxonomy_tid=16)